Artifact-Functions: A Capacity-Based Approach

Kathrin Koslicki & Olivier Massin

[penultimate version, please quote the final version: Kathrin, Koslicki & Olivier, Massin (2025). Artifact-Functions: A Capacity-Based Approach. In Maria J. García-Encinas & Fernando Martínez-Manrique, *Special Objects: Social, Fictional, Modal, and Non-Existent*. Springer. pp. 31-52.]

We argue that while intentions are necessary to define the category of artifacts, they are not necessary to define the different species of artifact. The question "What is it to be an artifact?" must be distinguished from the question "What is it to be an artifact of kind K?". It is one thing to ask what makes a violin an artifact; it is another to ask what makes a violin a violin (rather than a fork or a locomotive). Failure to distinguish between these two questions, we believe, leads to an exaggeration of the role of intentions in the philosophy of artifacts. It leads to the view that intentions are constitutive not just of what makes something an artifact, but also of what makes something a specific kind of artifact, a view which we shall reject. What makes a violin an artifact, on our view, is that it was intentionally produced for a certain purpose. By contrast, what makes a violin a violin, or so we want to propose, lies not in the intentions behind its production, but in its capacities. We therefore draw a distinction between the following two theses about the intentional dependence of artifacts:

(GIDA) Generic intentional dependence of artifacts: x is an artifact only if x has been produced with the intention that x be an object of kind K.

(SIDA) Specific intentional dependence of artifacts: x is an artifact of kind K only if x has been produced with the intention that x be an object of kind K.

(SIDA) implies (GIDA), since being an artifact of kind K implies being an artifact; but the reverse does not hold. We accept (GIDA) but reject (SIDA). That is, we accept that intentions are necessary to define the category of artifacts; but we do not accept that intentions are necessary to define a particular sub-kind of artifact. The intentions in question can be either individual intentions of single agents or collective intentions of groups of agents; in the latter case, the artifacts in question are social or institutional entities which are embedded within social or institutional practices (e.g., voting machines that are used to count votes in elections).

In the first part of this paper, we discuss a series of cases involving what we call "faith-based artifacts" which often exhibit a social dimension. These cases, we argue, constitute counterexamples to (SIDA). In the second part of the paper, we explain how a capacity-based approach to artifacts, by contrast, can accommodate faith-based artifacts. In the last section, we address an objection to the capacity-based approach.

1. Against the Specific Intentional Dependence of Artifacts

Specific intentional dependence is widely accepted in one form or another.[1] For instance, Arp, Smith and Spear (2015) define the category of artifacts as follows:

> artifact $=_{def}$ something that is deliberately designed (or, in certain borderline cases, selected) by human beings to address a particular purpose. (Arp, Smith and Spear, 2015, 3)[2]

Arp & al. then go on to define a subcategory of artifacts, viz., representational artifacts (e.g., books, pictures, maps, etc.), as follows:

> Representational artifact $=_{def}$ an artifact whose purpose is one of representation.
>
> Thus a representational artifact is an artifact that has been designed and made to be about something (some portion of reality) and using some public form or format. (Arp, Smith and Spear, 2015: 3)

This second definition is an application of (SIDA): having defined artifacts in general as intentionally created, in accordance with (GIDA), Arp & al. then proceed to define the species of representational artifacts by appeal to the content of the intentions that govern their production. They thereby move from (GIDA) to (SIDA), an unwarranted move, or so we shall argue.

---

[1] See, e.g., Arp, Smith & Spear (2015); Baker (2004), (2007); Dipert (1993); Evnine (2016); Hilpinen (1993), (2011); Houkes & Vermass (2004); Juvshik (2021b); Thomasson (2003), (2007), (2009).

[2] Note that Arp & al. propose that intentional production is not only necessary, but also sufficient, for something's being an artifact. We return below to the question of whether intentional production can also provide a sufficient condition for something's being an artifact generally or for something's being an artifact of a specific kind K.

Why reject specific intentional dependence as a necessary condition for something's being an artifact of a specific kind K? A counterexample to (SIDA) would consist in a case in which an object x is in fact an artifact of a certain kind K, but x was not produced with the intention that x be an object of kind K. Given (GIDA), in order for x to be an artifact, x must have been produced with the intention that x be an object of some other kind, K*; provided that K and K* are distinct kinds, however, such a case would satisfy (GIDA) but not (SIDA).

A first type of counterexample to (SIDA) consists in artifacts whose established use is for a purpose distinct from the one ascribed to them by their original author.[3] Bubble wrap was initially intended to be wallpaper but is now widely used instead as packaging material. According to the proposed objection to (SIDA), bubble wrap is an artifact that belongs to a kind (packaging material) distinct from the kind to which it was intended to belong (wallpaper). Proponents of (SIDA) may, however, respond to this objection as follows. In the same way as we can create a new artifact by selecting a natural object and using it in a certain way (e.g., by using a tree trunk as a bench; or by using the full moon as a reminder that one needs to cut one's hair; McGinn, 1995), one may also create a new artifact by using an existing artifact in a different way. Given this proposal, using an existing artifact for a novel purpose amounts to creating a new artifact. In cases of this sort, Jushvik (2021), for example, speaks of "appropriation", while Evnine (2022) speaks of "counter-use". Upholders of (SIDA) may thus reply to the objection just raised that, when artifacts are used for a purpose distinct from their intended purpose, a new function is intentionally assigned to the objects in question whose kind consequently fits with the intentions of the users who have now themselves become creators of a new kind of artifact.

More damaging to (SIDA), we shall argue, are artifacts of another type which we shall call "faith-based artifacts". The label "faith-based artifact" can be understood as follows:

> ***Faith-based artifacts*** $=_{\text{def}}$ artifacts of a kind intended and believed by their authors and users to perform a function which they do not in fact perform.

Consider, for instance, amulets intended to dispel evil spirits. Let's assume, for the purposes of this illustration, that both the original makers of amulets as well as those agents who go on to use and reproduce them sincerely believe that amulets perform their intended function of protecting

[3] We use the term, "author", broadly to include agents who are normally called "authors" as well as designers, inventors, builders, etc., and generally any agent or plurality of agents who is responsible for the creation of an artifact or artifact kind.

their wearers against evil spirits. In reality, however, or so we may suppose, the objects in question do not perform their intended function, since either there are no evil spirits; or, even if there were evil spirits, the amulets in question would not provide the promised protection to their wearers. As the name suggests, faith-based artifacts arguably include objects used for religious or ritualistic purposes, such as talismans, fetishes, totems, ex-votos, grigris, or Hamsas. But faith-based artifacts are not limited to distant places or times. Salt lamps, amber necklaces for children, homeopathy, aromatherapy and the like[4] are (arguably) candidates for being included under the rubric of "faith-based artifacts" that are familiar to us from our own social environment. Moreover, faith-based artifacts are not confined to the category of concrete particular objects, but (at least according to some approaches) may also include abstract entities, such as ideologies or theories. Nietzsche famously argued that morality is a human invention which, though consciously well-intended, is in fact used as an instrument of revenge by "weak" people, who are consumed by resentment. Nietzsche is often credited, together with Marx, as having thereby inaugurated a line of thought which diagnoses parts of human theories or ideologies as belonging to a kind distinct from the kind to which they were intended to belong. Such a diagnosis has also been applied to philosophy itself. For instance, on the therapeutic conception of philosophy ascribed to the later Wittgenstein, while philosophers intend their philosophical views to tackle real problems, the actual function of philosophy is to dissolve pseudo-problems. More recently, Thomasson (2017a; b; 2020) has argued that, though metaphysical theories are typically intended and believed by metaphysicians to make discoveries about the world, their actual function is different. In reality, so Thomasson proposes, metaphysical theories should be understood as issuing meta-linguistic recommendations about how concepts or words expressed in the object-language should be used (see Koslicki & Massin, 2023, for discussion). In all such cases, it is claimed that certain types of artifacts, including theoretical artifacts, fail to fulfill the function that their authors and users ascribe to them and instead perform a distinct function which is not readily apparent to their authors and users. If such claims are true, these theories or ideologies are faith-based artifacts, in our sense. Our argument against (SIDA), however, does not rely on any particular assumptions about the extension of the class of faith-based artifacts. Any faith-based artifact, we contend, constitutes a counterexample to (SIDA).[5]

[4] We assume that, since therapies are continuants (i.e., three-dimensional objects which persist through time by being "wholly present" at each moment at which they exist), on a par with recipes or protocols, they should therefore be counted as artifacts.

[5] What we call "faith-based artifacts" should be distinguished from *malfunctioning* or *defective* exemplars of otherwise non-faith-based artifact-kinds. For example, a can-opener, which –unbeknownst to its authors and users—is in fact

For the purposes of developing our argument against (SIDA), we will, in what follows, focus on a particular example of what we consider to be a faith-based artifact, viz., so-called "anti-radiation patches": these are small patches which are to be placed on mobile phones in order to reduce the potentially harmful effects supposedly caused by phone radiation (e.g., headaches, sleep disorders, hearing problems, increased risk of brain cancer, etc.). We assume that, in reality, the patches in question do not reduce phone radiation. Nonetheless, however, or so we shall suppose, their producers and subsequent users sincerely intend and believe that the patches reduce phone radiation. In this case, therefore, it would seem that whoever first intentionally produced such a patch did not produce an artifact that belongs to the kind, K, to which it was intended to belong.[6] Assuming, further, that every artifact belongs to at least one kind, it follows that the patches in question belong to some artifact-kind, K', that is distinct from the artifact-kind, K, to which they are intended to belong. (The assumption that there are no "kind-less" artifacts, which we shall justify further below, is accepted, for example, by Jushvik (2021b).) What this alternative artifact-kind, K', might be need not worry us at this stage, though we shall go on to provide a positive answer to this question in the second part of the paper. Whatever K' is, so long as K' is distinct from K, (SIDA) is refuted. Since the alleged anti-radiation patch lacks the powers that are falsely ascribed to it, the kind to which it in fact belongs is distinct from the kind to which it is intended to belong; and, therefore, (SIDA) should be rejected. Our argument against (SIDA), thus, can be formulated as follows:

P1 Some artifacts do not belong to their intended kind.

P2 All artifacts belong to some kind.

---

broken, may nevertheless be intended and believed by its authors and users to perform the function it does not in fact perform, viz., to open cans. Nevertheless, we do not consider a broken can-opener to be an example of what we mean by "faith-based artifact", since broken can-openers belong to a kind, viz., *can-opener*, at least some members of which do in fact perform the function their authors and users intend and believe them to perform. By contrast, the label "faith-based artifacts", as we understand it, designates artifact-kinds, *no* member of which in fact performs the function their authors and users intend and believe them to perform. Thus, in what follows, we assume that, for the purposes of the present discussion, malfunctioning or defective exemplars of otherwise non-faith-based artifact-kinds are excluded from the extension of our term, "faith-based artifacts". A proper treatment of the interesting and complex phenomenon of malfunction would, unfortunately, take us too far afield from our main topic of discussion.

[6] There is a more general question as to how an artifact's kind-membership is related to its function (independently of whether the function, here, is taken to be its actual function or its intended function). In some cases, e.g., can-openers, the label we use to pick out the artifact-kind in question is so closely related to the term we use to describe its presumed function, viz., to open cans, that there seems to be little or no distance between the artifact's presumed kind-membership and the function that is ascribed to it by its authors or users. The example on which we focus, viz., anti-radiation patches, is supposed to follow this model, only in this case there is of course the added complexity that the artifacts in question do not in fact perform the function they are intended and believed to perform. Nevertheless, we assume, in what follows, that the connection between the artifact's kind-membership and its alleged function is at least supposed to be as apparently unproblematic as it is in the case of, say, can-openers.

C Some artifacts belong to a kind distinct from their intended kind.

We can think of at least three ways in which proponents of (SIDA) may attempt to resist P1. The first such strategy is to maintain that faith-based artifacts in fact belong to the kind to which they are intended to belong because the kind in question is precisely the kind, *device intended to perform a certain function*. Given this proposal, even though the anti-radiation patch in reality does not reduce phone radiation, it is a device *intended* to reduce phone radiation, and that is all that is needed to specify the kind to which it belongs. According to this strategy, faith-based artifacts are classified into a kind, not on the basis of their actual function, but on the basis of their intended function. Hence, so the argument goes, such artifacts do not constitute a counterexample to (SIDA); for, trivially, an intended function is always intended.

This line of argument, however, is unsuccessful for two reasons. First, on this proposal, "K", in (SIDA) must be replaced by "device intended to perform a function F", which yields the following result: x is an artifact of kind, *device intended to perform a function F,* only if x has been produced with the intention that x be an object of the kind, *device intended to perform a function F*. But the agent who intentionally produced the patch did not intend to make a patch *intended* to reduce phone radiation: in other words, this agent did not intend to make an object of which she intends that it will reduce phone radiation. Rather, she intended to make an object which reduces phone radiation. The content of the agent's intention therefore does not make reference to a further intention, but rather to the state of affairs which the successful operation of the artifact in question would bring about, if it were effective. Thus, the proposed response to our objection mischaracterizes the content of the agent's intention by proposing to define the kind to which the anti-radiation patch belongs in terms of what it was intended to do. If the patch were classified as belonging to the kind, *device intended to reduce phone radiation*, it would belong to an unintended kind, thereby contradicting (SIDA).

Suppose we can somehow deal with this difficulty in a way that is compatible with (SIDA), for example by arguing that second-order intentions are in fact ubiquitous and redundant relative to the corresponding first-order intentions.[7] A second problem remains, however. If artifacts belong to their intended kind, then we cannot fail to produce artifacts of the kind we intended. Indeed, according to the present objection, if we intend to make an artifact of the kind, *perpetual motion machine*, what we really intend to make is an artifact of the kind, *intended perpetual motion machine*.

[7] We thank an anonymous referee of this volume for having pressed us on this point.

But whatever machine we end up making will indeed belong to the kind, *intended perpetual motion machine*. Intentional artifact production therefore cannot fail. This clashes not only with the general view that we often fail to produce artifacts of the kind we intended to produce, but also with the fact that artifact producers themselves often recognize their failure to produce what they intended to produce. People who intend to produce a perpetual motion machine generally recognize their failure: what they produced was intended to be a perpetual motion machine, but is not in fact an instance of the kind to which it was intended to belong, viz., the kind, *perpetual motion machine*.

The second way to resist P1 is to maintain that the anti-radiation patch belongs to the generic kind, *patch*. Indeed, the agent who intentionally produced the patch did in fact intend to produce a patch. Given this response, (SIDA) is upheld, since the patch belongs to a kind which coheres with the content of the agent's intention. Since the agent in question did in fact intend to produce a patch, i.e., a small rectangular object that sticks to flat surfaces, no conflict with (SIDA) emerges.

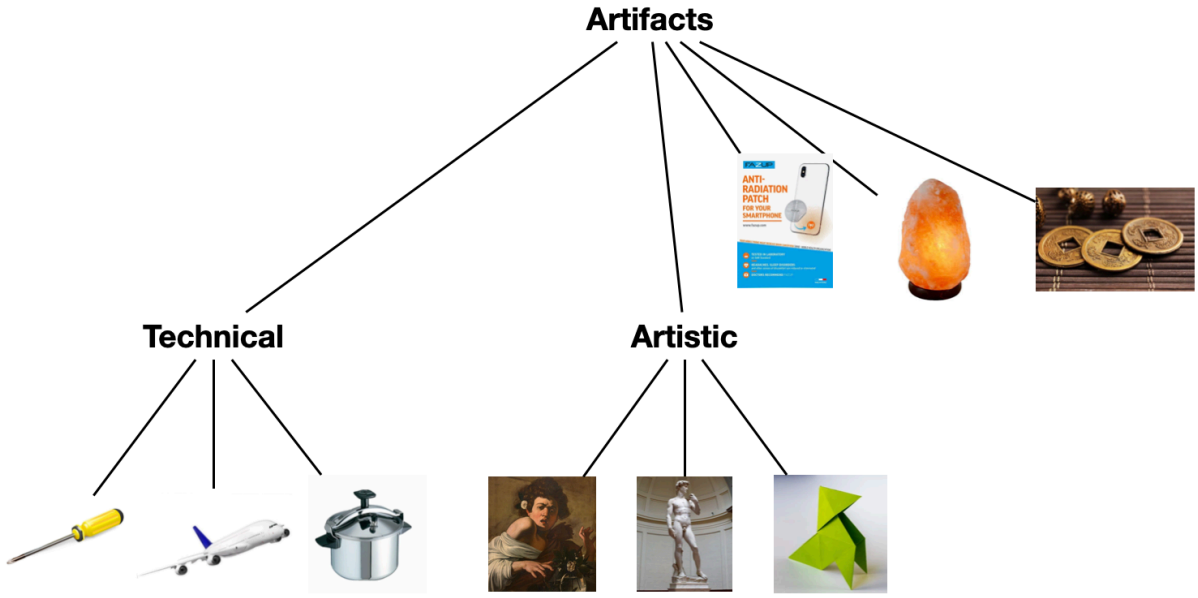
This response certainly accurately captures some aspects of the scenario in question: the patch in fact belongs to the generic kind, *patch*, and this generic category indeed fits with the agent's generic intention to produce a patch. The difficulty with this line of argument, however, is that, as soon as we try to give a more specific characterization of the patch in question, and of the intention that led to its intentional production, the generic proposal begins to look unsatisfactory. Anti-radiation patches, after all, are not just generic patches. For one thing, there are other types of patches which are not anti-radiation patches: e.g., decorative patches. Moreover, other patches, which are not anti-radiation patches, also satisfy the condition in terms of which we defined "faith-based artifacts", namely that their authors and users believe and intend them to perform a function which they do not in fact perform, e.g., anti-espionage patches which (or so we may assume) are also erroneously claimed to produce an effect they do not in fact produce, viz., to prevent intelligence services from listening in on private phone conversations. It would be implausible to deny that the generic category of patches can be subdivided into further species including, for example, anti-radiation patches, anti-espionage patches, and decorative patches. In the case of anti-radiation patches and anti-espionage patches, however, the kind to which these objects belong is not the kind to which they are intended to belong, since neither kind of patch performs its intended function.

A third and distinct way to try to reject P1 is to grant that the anti-radiation patch does not belong to a kind to which it is intended to belong, but to deny that it is an artifact at all. It may indeed be argued that unintended entities are not artifacts, but rather by-products, on a par with saw dust, bran, or traffic jams. Thus, if anti-radiation patches are not actually devices that reduce phone radiation, then whatever else they are is something unintended. Consequently, so the argument goes, anti-radiation patches really are by-products and not artifacts.

We accept that there is a distinction between artifacts and by-products. Among all the continuants produced by human actions, some are intended, and some are unintended. Artifacts satisfy the first condition, while by-products satisfy the second condition. The anti-radiation patch, however, is not a by-product: it was intentionality produced, only the kind to which it belongs is not the kind to which it was intended to belong. The producer who brought this object into existence did so deliberately for a certain purpose. Compare the case of the anti-radiation patch with that of saw dust: in a typical case, saw dust itself is not intentionally produced; that is, the agent who produces saw dust did not set themselves the goal of producing saw dust; rather, the agent intends to produce a different product (e.g., a piece of furniture), and the production of saw dust just happens alongside this intentional process which has as its aim the production of a different continuant. Otherwise put, there are two types of artifacts: those that belong to their intended kind, and those that do not. Both types are distinct from by-products, which are the unintended side-effects of intentional acts of production. Thus, P1 also cannot be rebutted by arguing that artifacts belonging to an unintended kind are in effect not artifacts at all.

Upholders of (SIDA) may instead attempt to call into question the second premise, P2: to this end, they might propose that some objects are "kind-less" artifacts, i.e., objects which belong to the generic kind, *artifact*, without also belonging to a more specific artifact-kind. Such a view may be congenial to those who are, on more general grounds, sympathetic to anti-essentialist approaches in metaphysics (e.g., Sidelle (1989)), and therefore harbor doubts as to whether the categories we use to classify objects correspond to any real divisions among kinds of entities. Recall, however, that the upholders of (SIDA) already accept that some artifacts belong to specific kinds. If the proponents of (SIDA) try to fend off our argument by denying the second premise, they are thus left with the hybrid position of holding that some artifacts belong to a specific kind, while others simply belong to the generic kind, *artifacts*, without belonging to any

specific artifact-kind. This position, illustrated in the following figure, posits that some artifacts are, e.g., technical or artistic, whereas others are simply generic artifacts.



The resulting position, however, is unstable. It is usually agreed that any entity that belongs to a genus must also belong to at least one species that falls under the genus in question. This is because species are held to divide the genus, so that a genus consequently is exhausted by its species. We can, of course, always discover a new species belonging to an already recognized genus. But once all the species of a genus have been mapped out, no space is left for entities that would belong to the genus in question without belonging to any of its species. Accordingly, when one discovers some entity which belongs to a genus without belonging to any of its previously known species, the normal reaction would be to conclude that a novel species has been discovered, which must then be added to the previously recognized species belonging to the genus in question. This, however, is precisely what the rejection of P2 forbids us to do. Following this proposal, we discover artifacts (e.g., amulets) which are not already subsumed under a more specific artifact-kind; but instead of subsuming them under a new or existing artifact-kind (e.g., pieces of jewelry), we designate them as "kind-less", or, as it were, free-floating artifacts. Such a bold move, if motivated solely by the desire to preserve (SIDA), would seem badly ad hoc. Note that the move in question may even generate a contradiction, assuming that one allows for negatively defined species (e.g., "non-technical artifacts"). In such a case, all artifacts would trivially belong to some more specific artifact-kind, if only one that is negatively defined.

We conclude, therefore, that (SIDA) must be rejected. One might wonder, however, whether a close cognate of (SIDA) might escape the objections we have raised above. This line of defense holds that for an artifact to belong to a kind K, the artifact has to be the *successful* product of an intention to make an artifact of kind K. Such a restriction of (SIDA) to successful productions is, for example, endorsed by Thomasson (2003, 600):

> "Necessarily, for all x and all artifactual kinds K, x is a K only if x is the product of a largely successful intention that (Kx), where one intends (Kx) only if one has a substantive concept of the nature of Ks that largely matches that of some group of prior makers of Ks (if there are any) and intends to realize that concept by imposing K-relevant features on the object."

Juvshik (2021b, 9317) similarly endorses a version of (SIDA) that is restricted to successful productions by way of the following principle:

> "Intention-dependence of artifacts (IDA): x is an artifact of kind K only if x is the successful product of an intention to make an artifact of kind K."

What Juvshik calls "Intention-dependence of artifacts" is close to (SIDA) but differs from it in three respects. First, while (IDA) mentions the term "artifact" in the specification of the intention guiding agents in their productive act, (SIDA) refrains from doing so for the purposes of avoiding circularity. Furthermore, (SIDA) specifies that x is the product of an intentional action rather than just of an intention since we take intentional production to be a type of intentional action. More importantly, like Thomasson, Jushvik builds a success condition into his principle (IDA). Let us accordingly define (SIDA*) in the following way:

(SIDA*) Specific intentional dependence of artifacts*: x is an artifact of kind K only if x has been successfully produced with the intention that x be an object of kind K.

How does (SIDA*) fare with respect to the problem of artifacts which belong to an unintended kind? Introducing a success condition may be a useful move assuming that one's goal is to secure a *sufficient* condition for something's belonging to a specific artifact-kind K. If reformulated as yielding a sufficient condition, such a principle would hold that x is an artifact of kind K *if* x has been produced with the intention that x be an object of kind K. Without an added success

condition, anti-radiation patches, amulets and the like would provide counterexamples to the proposed sufficient condition.[8] But we are not currently in the market of trying to formulate a sufficient condition for something's belonging to a specific artifact-kind K. Rather, our discussion has focused on the idea that being produced with a K-intention is a necessary condition for something's being an artifact of kind K. Faced with faith-based artifacts, which do not belong to the kind to which they are intended to belong, (SIDA*) is just as problematic as (SIDA) in providing a plausible candidate for a necessary condition that is required for the inclusion of something in a specific artifact-kind, regardless of whether a success condition is added. Since the anti-radiation patch is not a successful product of its authors' intentions, we must still confront the unappealing alternatives we have considered in the preceding paragraphs: either the patch belongs to no specific artifact-kind; or it is not an artifact. Both (SIDA) and (SIDA*) must reject artifacts which belong to an unintended kind, and maintain instead that such cases are either "kind-less" artifacts or that they are not artifacts at all. Both of these options, however, as we argued above, are unattractive and should be rejected.

2. Kinds for faith-based artifacts

Up to now, we have argued that (SIDA) should be rejected, i.e., that having been produced with the intention of belonging to a certain kind K is not a necessary condition for an artifact's belonging to the specific kind K to which it in fact belongs. This negative result, however, still leaves us with the open classificatory question: to which kind, then, do such apparently faith-based artifacts as anti-radiation patches and the like belong? Since anti-radiation patches do not perform their intended function, viz., to reduce phone radiation, it would seem that they should not be assigned to the kind, *artifacts which reduce phone radiation*. Above, we argued that the possibility of "kind-less" artifacts should be rejected, and that the kind to which anti-radiation patches belong is not their intended kind. It thus remains to be seen to which kind such objects do in fact belong.

A first potential response to the classificatory question, "To which kind do anti-radiation patches belong?", is to classify these objects simply in accordance with their purely physical attributes, e.g., as belonging to the kind, *square flexible thin objects that stick to flat surfaces*. We of course do not dispute that anti-radiation patches have the purely physical attributes in question. Nevertheless,

[8] As just noted, however, adding such a success condition appears to introduce an element of circularity into the account in question, since a successful intentional act of producing an artifact of kind K presumably just is an intentional act of production which in fact results in an artifact of kind K.

the option of classifying them as belonging to a kind on the basis of these purely physical attributes strikes us as unsuccessful for at least two reasons. First, the proposed classification fails to capture what is specific about anti-radiation patches as opposed to, say, nicotine patches. Secondly, the proposed classification fails to explain why anti-radiation patches continue to be used and reproduced (assuming, as we do, that they do in fact retain their popularity). It is often noted, however, that the explanatory value linked to the ascription of a function to a trait or a component of a system lies precisely in the fact that producing the effect in question explains why the trait or component continues to exist. Thus, (well-functioning) hearts in fact produce the effect of pumping blood and it is in virtue of the fact that they contribute in this way to the survival, proliferation, well-being, etc., of the organisms whose blood they help to circulate that they continue to be selected for and hence maintain their presence within the circulatory system of organisms of the type in question.[9] In what follows, we refer to the demand that function ascriptions play this explanatory role as the *"explanatory desideratum"*.

A second response to the classificatory question, "To which kind do anti-radiation patches belong?", one might consider is that anti-radiation patches should be classified in accordance with the intention guiding the agent who was responsible for their production, i.e., as belonging to the kind, *objects intended to reduce phone radiation*. This second option, again, strikes us as unsuccessful for two reasons. First, such a proposed classification fails to meet what we shall call the *"defectiveness desideratum"*. Since it is in fact true that the objects in question were *intended* to reduce phone radiation (even though in reality they fail to do so), the proposed classification invokes a condition which is satisfied by the objects in question and therefore does not capture the sense in which these objects are nevertheless defective.[10] In addition, the second proposed

[9] The explanatory value claimed here for the attribution of a function to a trait or component of a system applies specifically to a causal-historical or etiological notion of functions ("e-functions") (cf., e.g., Wright (1973), Millikan (1989), Neander (1991)). According to this approach, roughly, the presence of a token of a type (e.g., a heart) in a system (e.g., the circulatory system of an organism) can be explained by appeal to a history of past success to which the production of the effect in question (viz., pumping blood) has led in previous members of the same kind. Function ascriptions can, however, also be understood in other ways, e.g., along the lines of system-functions or design-functions ("d-functions"). According to the systems approach, the function of a trait or component (e.g., an assembly-line worker or machine) is understood in terms of its contribution to the manifestation of a capacity possessed by a system to which it belongs (e.g., an assembly-line that has the capacity to produce a certain product) (Cummins (1975)). The design-function of an artifact, for example, is understood to be the function the artifact was intended to have by its designer. See, for example, Wouters (2005), for an overview of the literature on biological function as well as function ascriptions in other domains, such as artifacts or representational mental states.

[10] Notice, too, that the defectiveness in question here applies to the whole kind, and not only to particular members of the kind, as it would, for example, in the case of malfunctioning or defective exemplars of otherwise non-faith-based artifacts. To illustrate, a broken can-opener is a defective member of a kind consisting of members which are typically able to carry out the kind-associated function of opening cans. An anti-radiation patch, by contrast, belongs to a kind consisting exclusively of members which are unable to carry out the function they are believed and intended to perform. Thus, in the latter case, the entire kind is pathological in a way that is absent from non-faith-based artifacts which include the occasional defective member.

classification, again, fails to meet the explanatory desideratum. The condition in question does explain why anti-radiation patches came into existence in the first place, since their supposed ability to reduce phone radiation was precisely what motivated their intentional production. At the same time, however, since they do not in fact perform this task, we cannot appeal to the mere fact that these objects were *intended* to reduce phone radiation to explain why they *continue* to be used and reproduced.

A third potential response to the classificatory question, "To which kind do anti-radiation patches belong?", invokes collective beliefs. According to this option, anti-radiation patches should be classified as belonging to the kind, *objects collectively believed to reduce phone radiation*.[11] An advantage of this proposed classification is that, in contrast to the previous two proposals we considered, it does in fact meet the explanatory desideratum: the fact that anti-radiation patches are collectively believed to reduce phone radiation (even though they in reality fail to do so) explains why they continue to be used and reproduced. Nevertheless, this option strikes us as unsuccessful for two reasons. First, classifying anti-radiation patches in accordance with what is collectively believed about them, again, fails to meet the defectiveness desideratum: since the condition in question, viz., that anti-radiation patches are collectively believed to reduce phone radiation, is satisfied, this proposal does not furnish us with the means by which to bring out their defective nature. Secondly, the proposed classification threatens to give rise to a proliferation of unwanted kinds and thereby fails to meet what we shall refer to as the *"non-proliferation desideratum"*. In general, we should resist the temptation to posit a new kind of object every time a condition of the form, "the xs are collectively believed to be F", is satisfied. Instead, the default assumption, in such a case, should be that some already existing objects simply acquire the new relational property of being collectively believed to be F, rather than that the collective belief in question brings a new object into existence which belongs to the kind, *objects collectively believed to be F*.

[11] This approach seems to be recommended by Evnine (2016) for the case of amulets which are produced with the intention of dispelling evil spirits, but which in fact fail to do so. With respect to such objects, Evnine writes: "In these cases what allows the coming into existence of a new type, and hence of objects falling under that type, will have to rely on belief that the object made performs the relevant function, in other words, on some kind of acceptance condition", together with the fact that "the acceptance be to some degree widely shared in the maker's social environment" (p. 127). Thus, according to Evnine's proposal, amulets should be classified into a kind on the basis of the fact that their maker believed that they would be able to dispel evil spirits, and that this belief is widely shared by members of the maker's social environment. This way of classifying amulets, in Evnine's view, imparts a *social* dimension to these entities which is lacking, for example, in "ordinary" artifacts like chairs.

Fourthly, it may be tempting to respond to the classificatory question, "To which kind do anti-radiation patches belong?", by appeal to the fact that the items in question may acquire various sorts of *social uses*. To illustrate, anti-radiation patches may be utilized for ornamental purposes, to signal one's defiance towards technological progress, to reinforce group cohesion, to mimic what others are doing, to enrich their sellers, to reassure their users, and the like. For each of these potential social uses, we can imagine classifying anti-radiation patches as belonging to a corresponding kind, viz., *ornamental objects*; *objects worn to signal one's defiance towards technological progress*; *objects which reinforce group cohesion*; *objects used to mimic the behavior of others*; *objects which enrich their sellers*; *objects which reassure their users*; etc. While we of course do not deny that anti-radiation patches may acquire all of these as well as potentially many other social uses, the strategy of classifying anti-radiation patches in accordance with this seemingly endless variety of actual or potential social uses runs afoul of satisfying what we might call the *"function-accident desideratum"*. As is widely noted in the literature on functional explanation, some distinction is needed between an item's *function*, on the one hand, and the many *accidental uses*, *by-products*, or *side-effects*, on the other hand, which can be associated with an item's production of the effect that is identified as its function (Hempel (1965), p. 305; Wright (1973), pp. 141-142). To illustrate, in addition to pumping blood, hearts also produce thumping sounds; but this latter effect is merely a by-product of the effect that is identified as the heart's function, viz., to pump blood. The fact that a polar bear's coat is heavy is a mere side-effect or by-product of its function, viz. to keep the polar bear warm in its frigid environment. A human nose, among other things, provides a convenient resting place for glasses; but this latter effect is merely an accidental use of a body-part whose function is to contribute in a certain way to the human respiratory system. To posit a new kind whenever an existing item is used in a new way would therefore similarly lead to a proliferation of unwanted kinds by collapsing functions with accidental uses, side-effects, and by-products.

A fifth response to the classificatory question, "To which kind do anti-radiation patches belong?", is based on Beth Preston's notion of *"phantom function"*. Phantom functions, according to Preston, are applicable precisely in cases like that of the anti-radiation patch in which "a type of artifact is regularly reproduced to serve a specific function, but no exemplar of it has ever been structurally capable of performing that function, or, in the nature of things, ever will be" (Preston (2009), 217). Examples of items with phantom functions cited by Preston are fengshui mirrors that are used to deflect "bad qi"; rabbits' feet that are worn as good luck charms; bug zappers that are thought to be effective against mosquitoes; or vitamin C that is administered in order to prevent colds (Preston (2013), 177). In all of these cases, so Preston argues, the attribution of the

function to the items in question is justified on the grounds that "producing this effect (whether it actually does so or not) contributes to the best explanation of the patterns of use to which past tokens of this type of item have been put, and which in turn have contributed to the reproduction of such items" (Preston (2013), 186-187). Thus, Preston's characterization seems to make room for classifying anti-radiation patches as belonging to the kind, *objects which reduce phone radiation*, after all, based on the fact that their phantom function, viz., reducing phone radiation (whether they do so or not), best explains why anti-radiation patches continue to be used and reproduced. In this way, the proposed classification therefore also appears to satisfy the explanatory desideratum.

We are doubtful, however, whether the proposed classification, as it stands, really satisfies the explanatory desideratum, without the introduction of further machinery. That an artifact actually produces a desired effect provides a good explanation of its continued use and reproduction. But why should the fact that an artifact does not actually produce an effect contribute to the best explanation of its continued use and reproduction? We should expect, on the contrary, that artifacts which fail to produce an intended or useful effect would at least eventually cease to be reproduced or used for the intended purpose. One way to bring out the concern in question is by reference to what is known as the "missing-mechanism" objection (see, for example, Kincaid (1990), Pettit (1996)). To illustrate, consider a case in which the continued presence of a certain ritual within a society (e.g., gift-giving) is said to be explained by appeal to its presumed function (e.g., to strengthen social cohesion). Given that the social phenomenon in question lies outside of the domain of evolutionary biology, the missing-mechanism objection now asks how, i.e., by means of which mechanism comparable to that of natural selection, the gift-giving ritual is maintained within a society or passed on from one generation to another. If the gift-giving ritual at issue in fact produces the effect it is said to produce, viz., to strengthen social cohesion, then – whatever the exact nature of the transmission mechanism that is posited in this case—at least this past history of success can figure in the best explanation of why members of the society in question continue to engage in the gift-giving ritual at issue. In our scenario, by contrast, no such actual history of success can figure in the best explanation of the continued use and reproduction of anti-radiation patches, since no past, present, or future tokens of the type in question (by hypothesis) ever have or will produce the effect of reducing phone radiation. The absence of an actual history of success thus makes the need to identify some non-mysterious underlying mechanism that explains the maintenance and transmission of the practice in question even more pressing. We shall refer to this added requirement as *"the non-mysterious-mechanism desideratum"*. The

next and final proposal, to which we now turn, can be seen as improving upon the previously considered options precisely by providing such a missing mechanism, while also satisfying the other constraints we have accumulated along the way.

To recap, we have, in the preceding sections, considered five responses to the classificatory question, "To which kind do anti-radiation patches belong?": that anti-radiation patches should be classified (i) on the basis of their purely physical attributes as belonging to the kind, *square flexible thin objects that stick to flat surfaces*); (ii) on the basis of the intentions of their authors as belonging to the kind, *objects intended to reduce phone radiation*; (iii) on the basis of collectively held beliefs as belonging to the kind, *objects collectively believed to reduce phone radiation*; (iv) on the basis of the many social uses they may acquire as belonging to such kinds as *ornamental objects*, etc.; (v) on the basis of their phantom function as belonging to the kind, *objects whose function is to reduce phone radiation (whether they do so or not)*.

Along the way, we identified various desiderata by means of which we were able to evaluate the proposals in question: (a) the *explanatory desideratum*, according to which a classification should explain why artifacts of the kind in question continue to be used and reproduced; (b) the *defectiveness desideratum*, according to which a classification should allow us to bring out that there is something defective about artifacts-kinds all of whose members are unable to carry out the function they are intended and believed to be able to perform; (c) the *non-proliferation desideratum*, which encourages us to avoid positing unwanted kinds; (d) the *function-accident desideratum*, according to which functions should not be collapsed with accidental uses, side-effects, or by-products; and (e) the *non-mysterious mechanism desideratum*, which points to the importance of being able to locate a clearly identifiable mechanism by means of which the continued use and reproduction of a kind of artifact is maintained within a society or transmitted from one generation to another. The five candidate answers to the classificatory question all turned out to be unsatisfactory by failing to meet one of more of the aforementioned desiderata.
Our preferred solution builds on the main insights motivating the five proposals considered above while at the same time avoiding their shortcomings. We propose that anti-radiation patches should be classified as belonging to a kind on the basis of certain of their *capacities*, namely those of their capacities which directly derive from their being *believed* to reduce phone radiation, together with the presence of a *desire* that phone radiation be reduced. We call these *"placebo capacities"*, due to their affinity to cases in which, say, a sugar pill is administered to a patient who erroneously believes that the pill will contribute to an effective treatment of a

disease, and who desires to be treated for the disease in question. Despite the fact that the placebo does not in fact target the disease at issue, the patient may nevertheless feel better, and thus experience a *"placebo effect"*, as a result of a psychological mechanism which is activated by the presence of a belief in a patient, who also desires to be treated, that the pill is effective in the treatment of the disease in question. What, then, are the capacities directly conferred on an object by the property of being believed to reduce phone radiation? If an object, x, is such that an agent believes and desires x to produce an effect, F, then, we submit, x has the capacity to satisfy, at least apparently (i.e., from the agent's perspective), the agent's desire that x Fs. Following this idea, we propose that anti-radiation patches should be classified as belonging to the kind, *objects subjectively satisfying an agent's desire to reduce phone radiation*. An object has the placebo capacity in question in virtue of being believed to reduce phone radiation (even if in reality it fails to do so). Applying the anti-radiation patch to the agent's phone *subjectively* satisfies the agent's desire to reduce phone radiation, since the agent has the desire to reduce phone radiation and believes that applying the patch is an effective measure to secure this outcome. "Subjective desire satisfaction" is arguably a misnomer in the following sense: if an agent's desire is only subjectively (but not objectively) satisfied, then it only *appears* to be the case, from the agent's perspective, that the agent's desire is satisfied, even though the relevant state of affairs, i.e., a reduction in phone radiation, does not in fact obtain as a result of the agent's applying the patch. However, the already existing label, "subjective desire satisfaction", is nevertheless appropriate, since "satisfaction" may be taken to mean either the actual fulfillment of a desire or the feeling or contentment that comes with a desire's apparently being satisfied. In the latter case, applying the patch in order to reduce phone radiation only subjectively (but not objectively) satisfies an agent's desire to reduce phone radiation.[12]

The placebo view differs from the collective belief proposal we considered earlier, in the following two respects. First, although a belief in the object's effectiveness is required for the presence of the relevant placebo capacities, the object's kind-membership is not defined in terms of the presupposed belief, but rather in terms of the condition that the relevant desire be subjectively satisfied. Secondly, the required belief in question may be, but need not be, collective. If, on the one hand, the belief is held by an individual agent, without being widely shared in the agent's social environment, then the anti-radiation patch nevertheless has the placebo capacity relative to the agent who has the relevant belief/desire combination. If, on the

[12] For the distinction between subjective and objective desire satisfaction, see for example Heathwood (2006), who defends the idea that pleasure is the subjective satisfaction of desires which in turn is what matters in welfare, i.e., in making one's life go well.

other hand, the relevant belief is widely shared in the agent's social environment, then the patch's placebo capacity to lead to the subjective satisfaction of the relevant desire applies to the whole group of agents collectively.

The placebo view has the advantage over the previously considered proposals that it meets the five desiderata laid out above. The placebo view satisfies the explanatory desideratum in that the device's placebo capacity to subjectively satisfy an agent's desire to reduce phone radiation explains not only why the anti-radiation patch was intentionally produced in the first place, but also why it continues to be used and reproduced. Secondly, due to the distinction between subjective and objective desire satisfaction, the placebo view meets the defectiveness desideratum: although the patch is effective in subjectively satisfying an agent's desire to reduce phone radiation (provided that the agent also has the relevant belief that it will do so), it is defective insofar as it fails to satisfy the agent's desire objectively, i.e., given that the relevant state of affairs does not in fact obtain as a result of the patch's application. Thirdly, the placebo view avoids the proliferation of unwanted kinds, since it does not posit a new kind of object whenever a plurality of objects is collectively believed to satisfy some condition. The placebo view meets the fourth function-accident desideratum, since it non-arbitrarily classifies anti-radiation patches as belonging to the kind, *objects subjectively satisfying an agent's desire to reduce phone radiation*, on the basis of their placebo capacity. Of course, the patch's manifestation of its placebo capacity to subjectively satisfy an agent's desire to protect themselves from phone radiation may nevertheless give rise to various accidental uses, side-effects, or by-products, such as those countenanced earlier, e.g., to reassure its users or to reinforce social cohesion. But these accidental uses, side-effects, or by-products do not follow solely and directly from the presence of a desire in the agent to reduce phone radiation together with the belief that the patch produces the desired outcome. Suppose, for example, an agent, Bob, has the relevant belief that applying the patch reduces phone radiation as well as the relevant desire to reduce phone radiation. However, Bob has the desire to reduce phone radiation, or so we may imagine, not because he believes phone radiation is dangerous, but because Bob believes that applying the patch will please another agent, Julie, who does believe that phone radiation is dangerous and would like it to be reduced. In this case, Bob's applying the patch will reassure Julie, but not Bob, even though Bob's desire to reduce phone radiation is subjectively satisfied. Therefore, the anti-radiation patch should not be classified in accordance with a merely accidental social use, e.g., *objects reassuring their user*, which need not be present in all cases in which an agent has the relevant attitudes, viz., the desire to reduce phone radiation, together with the belief that the patch is able to do so. Since the placebo

view clearly identifies a psychological mechanism by means of which the continued use and reproduction of the anti-radiation patch can be explained, it also meets the fifth non-mysterious-mechanism desideratum.

3. Objection: Kinds without beliefs?

Our goal in the previous section was to argue that the placebo view should be preferred over its competitors, since it meets the five previously mentioned desiderata without, as far as we can see, giving rise to other unattractive consequences that can be avoided by the alternative proposals. In this section, we want to consider an objection to which the placebo view seems to be susceptible.

Suppose an agent produces an anti-radiation patch with the intention of reducing phone radiation but no one (including its maker) ever acquires the belief that the patch will reduce phone radiation. Perhaps, or so we may imagine, during the process of production, the agent grows more and more disillusioned as to whether the patch she is intentionally producing will be effective. Nevertheless, she carries on and completes the remaining steps needed to finish the patch's production. By the time the work is accomplished, however, the agent has lost all faith in the anti-radiation patch she has intentionally produced and cannot bring herself to believe that it will be effective in reducing phone radiation. The patch, moreover, never develops a following among other agents and therefore no practice of using or reproducing the patch for the purposes of reducing phone radiation is ever established. Since the requisite belief in the patch's alleged effectiveness is missing, the patch therefore also does not acquire the placebo capacity to subjectively satisfy anyone's desire to reduce phone radiation. Thus, the patch cannot be classified as belonging to the kind, *objects subjectively satisfying an agent's desire to reduce phone radiation*, in the absence of such a placebo capacity. To what kind, then, does such a belief-less patch belong?

As a starting point, let's begin by setting out some basic assumptions about the scenario just described. First, whatever else we may want to say about the patch's more specific kind-membership, the belief-less patch at least belongs to the generic kind, *patch*. Secondly, the belief-less patch has at least certain physical characteristics, e.g., it is square, flexible, thin and sticky on one side; and, in virtue of having these physical characteristics, the belief-less patch also has certain capacities, e.g., the capacity to stick to flat surfaces, to reflect light in a certain way, etc. Thirdly, the patch was intentionally produced by its maker, regardless of what the more specific content of the maker's productive intention might have been.

Beyond these basic assumptions, however, different reactions to the scenario outlined above are possible, depending in particular on how the following two questions are resolved. First, is the belief-less patch an *artifact*? And, secondly, does the belief-less patch have a *function*? Given these two choice-points, at least four different reactions to the scenario described above are in principle available: (1) the patch is an artifact and has a function; (2) the patch is an artifact but does not have a function; (3) the patch is not an artifact but nevertheless has a function; and (4) the patch is neither an artifact nor does it have a function. In what follows, we briefly comment on the four options just outlined.

According to the first option, the patch is an artifact and has a function. Assuming that the patch's maker had the intention to produce a certain kind of object, the belief-less patch satisfies the necessary condition for something's being an artifact specified by (GIDA). Given that the belief-less patch fails to give rise to a practice of use and reproduction, a function ascription to the belief-less patch cannot be justified by appeal to a past history of success. As noted above, the belief-less patch certainly has certain capacities that are derived from its physical attributes, e.g., the capacity to stick to flat surfaces. Whether any of these capacities warrant being recognized as the (or a) function of the belief-less patch, however, depends on how more general questions concerning the explanatory value(s) associated with function ascriptions are resolved. One direction in which this first option could be developed is to classify the patch as a kind of technical artifact whose function is to help agents resolve certain practical problems, e.g., by means of its ability to stick to flat surfaces. Given that the patch in question neither satisfies its maker's original expectations nor catches on among other potential users and reproducers, however, the belief-less patch can be considered to be, in a certain sense, a *failed* technical artifact. The belief-less patch apparently does not satisfy a pressing demand, at least among the current population of agents, and is therefore not incorporated into an existing or new practice as a useful tool.

The second option takes the belief-less patch to be an artifact which lacks a function. Again, the inclusion of the belief-less patch in the category of artifacts can be motivated on the grounds that the belief-less patch was intentionally produced and therefore satisfies the necessary condition specified in (GIDA). This option avoids the difficulty of having to identify a basis on which a function ascription to the belief-less patch could be justified. This response does, however, have the potential to create challenges of its own. Not only does it lead to a bifurcation of the category

of patches into those that have functions (e.g., nicotine patches, decorative patches, anti-radiation patches, etc.) and those that lack functions (e.g., the belief-less patch); but, in addition, the second response leads to a division of the category of artifacts more generally into those that have functions and those that lack functions (see Juvshik, 2021a for a recent defense of this position). Such a conception of the category of artifacts, for example, closes off the possibility that the generic kind, *artifact*, can be divided into more specific artifact-kinds (e.g., technical, artistic, faith-based, etc. artifacts) by reference to their distinct functions. To illustrate, the function of technical artifacts, according to this proposal, might be to help agents solve practical problems, while artistic artifacts might be taken to have the function of eliciting artistic experiences; and so on for the other sub-kinds of the genus, *artifacts*. The conjunction of (GIDA), together with a specification of the different kinds of artifact-functions, may strike us as a promising direction in which to look for a set of conditions that are individually necessary and jointly sufficient for something's being an artifact.

The third option holds that the belief-less patch is not an artifact but nevertheless has a function. Presumably, what underlies this response is the idea that something's being an artifact requires more than intentional production, i.e., the satisfaction of the necessary condition specified by (GIDA). Certainly, function ascriptions are applicable to many types of entities and across a wide range of domains, including but by no means limited to that of artifacts, biological traits or parts of organisms, representational mental states, concepts, linguistic expressions or language as a whole, as well as social practices. At the same time, function ascriptions are not appropriate across all domains or all phenomena. To illustrate, as Aristotle remarks in *Physics* II.8, the rain's falling downwards or destroying a farmer's crop are not phenomena that are susceptible to a functional explanation, since the former can be given a purely physical explanation, while the latter presents us a happenstance that comes about by coincidence. Thus, if the third option is understood as maintaining, for example, that the belief-less patch is a "mere" a physical object, then it is, as of yet, mysterious on what basis a function ascription to the belief-less patch could be justified.

According to the fourth option, the patch is neither an artifact nor does it have a function. Those sympathetic to the fourth option might agree with the previous response that mere intentional production, as specified by (GIDA), while necessary, is not in itself sufficient for something's being an artifact. In addition, proponents of the fourth option might also endorse the position just mentioned according to which the belief-less patch is a "mere" physical object, i.e., an object

that has the physical attributes and capacities cited earlier. However, unlike the previous option, the fourth response holds that, as a "mere" physical object, the belief-less patch lacks a function. This response therefore foregoes the responsibility of having to identify a basis on which a function can be ascribed to the belief-less patch.

As this brief discussion of the "belief-less patch" scenario has brought out, a commitment to a specific one among the four options we distinguished would require us to engage with larger debates that lie outside of the scope of our present discussion. We therefore defer a more detailed treatment to another occasion. Suffice it to say, however, for the purposes of the present discussion, that any of the options considered in (1)-(4) would allow for the development of a response to the classificatory question, "To what kind does the belief-less patch belong?", posed above. We therefore conclude that, while undoubtedly further work remains to be done, the plausibility of the placebo view can be defended even in the face of belief-less patches.

4. Conclusion

In this paper, we have argued that, contrary to standard assumptions, artifacts are intention-dependent only in a generic way, as described by (GIDA), but not in the specific way required by (SIDA). Intentional production, in our view, is a necessary condition for an object's inclusion in the generic category of artifacts. But an artifact's membership in the specific artifact-kind to which it in fact belongs does not always mirror the specific content of the productive intention guiding the artifact's maker. Our main argument against (SIDA) turned on a phenomenon we called "faith-based artifacts": artifacts belonging to a kind (e.g., anti-radiation patches) whose members are believed and intended by their authors and users to carry out a function (viz., to reduce phone radiation) which they do not in fact perform. Such artifacts, we argued, are most plausibly classified as belonging to a specific artifact-kind based on certain of their capacities, namely their *placebo capacities* to *subjectively satisfy an agent's desire to produce the relevant effect* (e.g., to reduce phone radiation). The placebo view turned out to be the most promising option in meeting a series of desiderata we set out in the course of evaluating other alternative classifications. This result, however, recommends a capacity-based approach to artifacts over an intention-based approach. Faith-based artifacts, after all, do not inherit their placebo capacities from their maker's productive intentions, since the content of these intentions would falsely predict that faith-based artifacts have the power to produce effects which they do not in fact produce. Rather, a faith-based artifact derives its placebo capacities (e.g., to subjectively satisfy an

agent's desire to reduce phone radiation) from the fact that an agent (a maker, user, or reproducer) desires that the relevant effect be produced and believes that the artifact in question has the power to produce it. We therefore conclude that the role played by author-intentions in determining an artifact's specific kind-membership has been exaggerated. A capacity-based approach thus offers an attractive alternative when it comes to cases, such as faith-based artifacts, which have proven to raise especially challenging questions for existing accounts of artifacts.

References

Arp, Robert, Smith, Barry, and Spear, Andrew D. (2015): Building Ontologies with Basic Formal Ontology, MIT Press, Cambridge, MA

Baker, Lynne Rudder (2004): "The Ontology of Artifacts", Philosophical Explorations, Vol. 7, No. 2, pp. 99-111, URL = https://doi.org/10.1080/1386979041000169446 2

Baker, Lynne Rudder (2007): The Metaphysics of Everyday Life: An Essay in Practical Realism,

Cambridge University Press, New York, NY

Cummins, Robert (1975): "Functional Analysis", The Journal of Philosophy, Vol. 72, pp. 741-764

Dipert, Randall R. (1993): Artifacts, Art Works, and Agency, Temple University Press, Philadelphia, PA

Evnine, Simon (2016): Making Objects and Events: A Hylomorphic Theory of Artifacts, Actions, and Organisms, Oxford University Press, Oxford, UK

Evnine, Simon J. (2022): "The Historicity of Artifacts: Use and Counter-Use", Metaphysics, Vol. 5, No. 1, pp. 1–13, URL=https://doi.org/10.5334/met.74

Heathwood, Chris (2006). Desire satisfactionism and hedonism. Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition 128(3), 539-563, https://www.jstor.org/stable/4321735

Hempel, Carl G. (1965). The logic of functional analysis. Aspects of Scientific Explanation and Other Essays in Philosophy of Science. New York: The Free Press, 297-330, reprinted with some modifications from Llewellyn Gross, ed., Symposium on Sociological Theory, New York: Harper & Row, 1959.

Hilpinen, Risto (1993): "Authors and Artifacts", Proceedings of the Aristotelian Society, Vol. 93, pp. 155-178

Hilpinen, Risto (2011): "Artifact", The Stanford Encyclopedia of Philosophy (Winter 2011 Edition), edited by Edward N. Zalta, http://plato.stanford.edu/archives/win2011/entries/artifact/

Houkes, Wybo, and Vermass, Pieter E. (2004): "Actions Versus Functions: A Plea for an Alternative Metaphysics of Artifacts", The Monist, Vol. 87 (January 2004), pp. 52-71

Juvshik, Tim (2021a): "Function Essentialism about Artifacts", Philosophical Studies, Vol. 178, pp. 2943–2964, URL = https://doi.org/10.1007/s11098-020-01594-w

Juvshik, Tim (2021b). Artifacts and mind-dependence. *Synthese*, *199*(3-4), 9313-9336, URL = https://doi.org/10.1007/s11229-021-03204-6

Kincaid, Harold (1990). Assessing Functional Explanations in the Social Sciences. PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association, Volume One: Contributed Papers (1990): 341-354.

Koslicki, K., & Massin, O. (2023). A Socratic essentialist defense of non-verbal definitional disputes. Ratio, 00, 1–15. https://doi.org/10.1111/rati.12376

McGinn, Colin (1995) "Contract with Reality", *The New Republic*, May 22.

Margolis, Eric, and Laurence, Stephen (eds.) (2007): Creations of the Mind: Theories of Artifacts and Their Representation, Oxford University Press, New York, NY
Pettit, P. (1996). Functional explanation and virtual selection. *The British journal for the philosophy of science*, *47*(2), 291-302.

Millikan, Ruth G. (1989). In defense of proper functions. Philosophy of Science 56: 288–302.

Nagel, Ernest (1961). The Structure of Science, New York: Harcourt Brace Jovanovich.

Neander, Karen (1991). Function as selected effects: The conceptual analyst's defense. Philosophy of Science 58: 168–184.

Pettit, Philip (1996). Functional Explanation and Virtual Selection. The British Journal for the Philosophy of Science 47(2): 291-302

Preston, Beth (2009): "Philosophical Theories of Artifact Functions", in: Handbook of the Philosophy of Science. Volume 9: Philosophy of Technology and Engineering Sciences, edited by Anthonie Meijers, North-Holland, The Netherlands, pp. 213-233

Preston, Beth (2013): A Philosophy of Material Culture: Action, Function, and Mind, Routledge, New York, NY

Sidelle, Alan (1989). Necessity, Essence, and Individuation: A Defense of Conventionalism, Cornell University Press, Ithaca, NY

Thomasson, Amie (2003): "Realism and Human Kinds", Philosophy and Phenomenological Research, Vol. LXVII, No. 3, pp. 580-609

Thomasson, Amie (2007): "Artifacts and Human Concepts", in Margolis & Laurence (eds.), pp. 52-73

Thomasson, Amie (2009): "Artifacts in Metaphysics", in: Handbook of the Philosophy of Science. Volume 9: Philosophy of Technology and Engineering Sciences, edited by Anthonie Meijers, North-Holland, The Netherlands, pp. 191-212

Thomasson, A. (2017a). Metaphysical disputes and metalinguistic negotiation. Analytic Philosophy, 58(1), 1–28. https://doi.org/10.1111/PHIB.12087

Thomasson, A. (2017b). What can we do, when we do metaphysics? In G. D'Oro & S. Overgaard (Eds.), The Cambridge Companion to Philosophical Methodology (Cambridge Companions to Philosophy, pp. 101–121). Cambridge University Press. https://doi.org/10.1017/9781316344118.007

Thomasson, A. (2020). Norms and necessity. Oxford University Press.

Wouters, Arno (2005). The function debate in philosophy. *Acta Biotheoretica* 53: 123–151.

Wright, Larry (1973). Functions. *The Philosophical Review*, 82(2): 139-168.